

- 9 -

Claims

1. A process for the isolation of a crystalline carotenoid compound from microbial biomass comprising ~~the steps of~~ disrupting the microbial cell walls, separating cellular debris from the carotenoid-containing residue, including a wash, <sup>of one member of the group consisting of</sup> either the microbial biomass, the disrupted cell mass <sup>and</sup> or the carotenoid-containing residue with a solvent ~~suitable~~ to remove lipid, suspending the obtained carotenoid crystals in water to float the crystals, recovering the crystals and, optionally, further purifying the crystals.

2. The process of claim 1, wherein the carotenoid-containing residue is washed with a solvent ~~suitable~~ to remove lipid.

3. The process of claim 2, wherein the carotenoid-containing residue is washed with water prior to lipid removal.

4. The process of any one of the claims 1 to 3, wherein the solvent ~~suitable~~ to remove lipid is a lower alcohol or acetone, ~~preferably ethanol~~.

5. The process of any one of the claims 1 to 4, wherein a solvent ~~not~~ immiscible with water is added to the microbial cells before, during or after disrupting the cell walls.

6. The process of claim 5, wherein said solvent <sup>is</sup> ~~not~~ miscible with water is added to the disrupted cell mass after disrupting the cell walls.

7. The process of claim 5 or 6, wherein said solvent <sup>is</sup> ~~not~~ miscible with water is an oil, ~~preferably a vegetable oil~~.

8. The process of any one of the claims 1 to 7, wherein floating of the crystals is <sup>affected with</sup> improved by bubbling <sup>of a</sup> gas through the suspension.

- 10 -

9. The process of any one of the claims 1 to 8, wherein the water to float the crystals further contains a salt and/or an oil.

10. The process of claim 9, wherein the water to float the crystals  
5 contains a vegetable oil.

11. The process of any one of the claims 1 to 10, wherein the microbial biomass is from *Blakeslea trispora*.

10 12. The process of any one of the claims 1 to 11, wherein the carotenoid compound is  $\beta$ -carotene.

FOOTNOTES